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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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CORNING INCORPORATED  
SP-TI-3-1  
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EXAMINER

HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 07/09/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/675,352

Applicant(s)

CRAFT ET AL.

Examiner

John Hoffmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5,6
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-9, drawn to a system of making a fiber, classified in class 65, subclass 533.
- II. Claims 10-22, drawn to a method of making a preform, classified in class 65, subclass 404.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another process such as making two fiber couplers simultaneously.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Randall Wayland on July 2, 2002 a provisional election was made without traverse to prosecute the invention of Group I, claims 10-22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-9 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The terms "induction heating apparatus" and "induction heater" cannot be found in the specification.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

Claims 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear if the claims require the ratio to be between 5:12 and something - or if the "between" should not be there and thus the ratio is 5 to 12. Claim 14 has the same problem - it is unclear if "between" needs to be deleted, or if the second member of the range is missing.

***Claim Rejections - 35 USC § 103***

Claims 10-16 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humbert 5970750.

Figure 3 of Humbert and the associated text discloses the invention. Heater 5 is an induction plasma torch and thus is an induction heating device. As to heating sufficiently to allow a gob to drop. The temperature is clearly hot enough to allow any thing to drop. It is noted the claim does not require that a gob actually drops, or what kind of gob can drop. As to the step of removing "additional glass" - it is noted that there is no prior mention of any other glass or removing of any; the term "additional" is not given any weight. The glass to the right of feature 11 of Humbert is the glass that is removed. There is no discussion of the step of transferring the preform. It would have been obvious to transfer the Humbert preform to a furnace to make a fiber, because that is the intended purpose of the Humbert preform, and because it is clear that a fiber cannot be drawn from the Humbert apparatus in which the preform is made. AS to the tip shape being a "pre-optimized tip": page 3, lines 18-20 defines what this term means: a tip that has been preshaped such that it has a taper approximately equal to what it will have when fiber is being drawn therefrom in a draw apparatus. Looking at Applicant's figures 2-3, the taper varies with location. Given the Humbert figures, the taper will vary between infinity and zero - depending upon the location it is measured. Thus, regardless of what the unspecified taper is during drawing - the Humbert preform will have a slope/table at some location equal to it.

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Alternatively: the claims do not require step c) to come after step b). From applicant's disclosure (page 1, lines 22-24 and elsewhere) the pre-optimized shape is formed merely by removing glass in a furnace with the same temperature profile. Thus it would have been inherent that whatever the shape the Humbert tip is (when the fiber is being drawn) just prior to the creation of the useable fiber, that the other glass being removed, will be the junk glass and it will create the pre-optimized tip.

To look at it another way: Applicant improved the prior art process to include a transfer step after the stripping and before the spinning. However, the claim does not require the transfer step to occur after the stripping. Therefore claim 10 reads on any prior claim that has stripping and any step of transferring the preform.

Claim 11: the specification gives no example of what a profile may or maynot be. Thus it is reasonable for it to be as big or as small as desired. It is clear to one that one could find an identical short temperature gradient profile (say from 500C to 505C) in each of the apparatuses; the claims do not require the profiles to have any sort of orientation, direction or length.

Claim 12: as per Applicant's figure 4, the induction heater (i.e. coil plus receptor) does not completely surround the preform. Further it does not seem likely that Applicant would wish someone to avoid infringement by having a long preform that extends outside the heater. Thus it is deemed that the claim reads on "partially surrounding" the preform. Thus the Humbert heater 5 partially surrounds the heater, i.e. maybe 1%. Alternatively, it would have been obvious to enclose the entire Humber apparatus in a box so as to protect the preform from dirt and drafts, and to protect

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people from accidentally getting burned - thus the entire structure is the heater which surrounds the preform.

Claims 13-14 as to the ratio being 5 to 12 (6 to 9 for claim 14) - as indicated above, one could find a slope/taper as being anything between 0 and infinity.

Claims 15-16: as to the heating apparatus "including" a temperature, this is interpreted as causing something to have such a temperature. Humbert does not disclose a temperature. Col. 1, line 45-50 indicate that the torch vaporizes glass; it is inherent that such a high temperature is well above the claimed temperatures and thus at least a portion of the preform or surrounding gas is at the claimed temperature for at least a portion of the process.

Claim 21: (see how Humbert is applied to claims 10 and 11 above). Humbert does not disclose the multiple apparatuses. IT would have been obvious to have multiple fiber operations set up so that one can make multiple amounts of fiber.

Claim 22: it is noted that the claims do not require any sort of correspondence between the number of preforms, pregobbing apparatus and draw apparatus. It is noted that the claims put no boundaries on the location of the apparatuses. For example: one could have a room with 10 pregobbers which preoptimize 8 preforms (two of the pregobbers being idle). Also in the room are 12 draw furnaces - only 8 of which are used to draw the 8 preforms. Examiner believes that an infringer should not be able to overcome the claim - merely by having some idle pregobbers. Also, what if, in an adjoining room, the fiber producer had some additional fiber drawers or pregobbers? And what if the company had some additional draw towers or pre-gobbers in

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another factory? There is no difference between a pregobber and a draw furnace (all prior art methods have the pre-gobbing and the drawing done by the same apparatus) . Couldn't the one of the pre-gobbers be used as a part-time pre-gobber - and at other times as a draw apparatus? For these factors and because claim 22 does not require that the apparatus of claim 22 further limit the apparatus of claim 21: one can arbitrarily deemed one fewer than said "plurality of pregobbing apparatus" of claim 21 to be the "lesser number". The claims are open to having additional apparatus.

Alternatively, it would have been obvious to have many rooms of such operations - and one could have more pregobbing apparatus in one room - than draw apparatuses of a second room - depending upon the size of the rooms. Since the apparatus of claim 22 need not be the apparatus of claim 21 - they need not interact.

Most importantly, it is generally not invention to have multiple apparatus when a rate-limiting step would otherwise cause other equipment to stand idle.

Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkey 5152818.

The invention is disclosed at col. 7, lines 25-30 of Berkey. Berkey does not disclose the step of causing a temperature profile to be substantially equal to a drawing furnace. IT would have been obvious to have two of the Berkey furnaces and to have each of them make fiber - so as to make twice as much fiber. It would have been obvious to have them have identical temperature profiles -so that they make identical fibers; the first furnace being separate from the second furnace. Berkey's furnace is a



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pre-gobbing furnace and draw furnace - because it does either. IT is proper to consider the first furnace to be a pre-gobbing furnace and the second furnace to be a draw furnace. Berkey discloses a gobbing step - it is proper to consider it a pregobbing step -because there is no difference between the two -except for what follows. The present claim does not require anything happen after the pregobbing step: no transfer, no gobbing, no fiber drawing, nothing. The step of causing the profiles to be equal can be before or after the pregobbing step.

Claim 18 requires the ratio to be "between about 5 to...12" but it does not indicate what the second ratio (between 5:12 and what?). Thus it could be larger or smaller(e.g. between 5:12 and 100:1; between 5:12 and 1:100). Thus, regardless of that the Berkey ratio is, it is between 5 to 12 and some other ratio. Claim 19 is met for the same reason.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Humbert 5970750 in view of Blankenship 5059229 or Lysson 5897681.

Claim 20 is substantially the same as claims 10-11, please see how they are treated above. Claim 20 also requires the draw furnace to be an induction furnace. Humbert discloses little about the drawing step. Lysson and Blankenship are superior drawing methods - that use induction furnaces. It would have been obvious to alter the Humbert method to include the Lysson or the Blankenship drawing method for their respective improvements.

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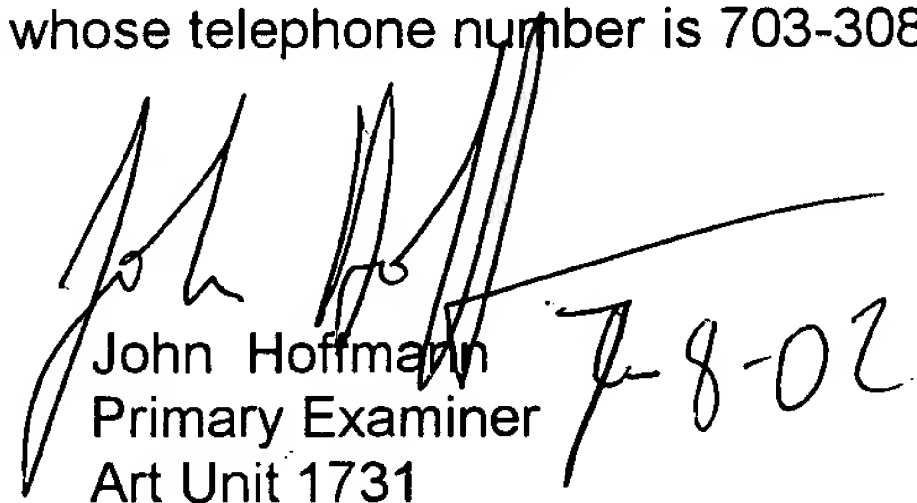
**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimizu, Keck, Lemon, Harvey, Camion and Fujii are cited as being of general interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is 703-308-0469. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7115 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
John Hoffmann  
Primary Examiner  
Art Unit 1731  
7-8-02

Jmh

July 8, 2002